

REMARKS

This amendment is in response to the Official Action dated April 21, 2005. Claims 1 and 17 have been amended and Claims 6, 10, 13-16, 22, 26 and 29-32 have been cancelled. The application now includes Claims 1-5, 7-9, 11-12, 17-21, 23-25 and 27-28 with Claims 1, 8, 17 and 24 being the only independent claims. Favorable reconsideration, in view of the above amendments and accompanying remarks, is respectfully requested.

In paragraph 3 of the Official Action, the Examiner has rejected Claims 1-5, 8, 9, 12, 17-21, 24, 25 and 28 under the provisions of U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,549,181 to Evans. In light of the amendments to the claims and/or for the reasons discussed below, this rejection is respectfully traversed.

As amended, Claim 1 now defines the invention as a disc brake assembly comprising an anchor bracket adapted to be secured to a vehicle component; a brake caliper adapted to be secured to the anchor bracket; an inboard friction pad and an outboard friction pad carried by the disc brake assembly and adapted to be disposed on opposite axial sides of an associated brake rotor; actuation means for selectively moving the inboard and outboard friction pads into frictional engagement with the rotor; and a pad spring carried by at least one end of one of the friction pads for moving the friction pads from engagement with the rotor when said actuation means is released; wherein the pad spring includes a generally *U shaped portion having a first tab and a second tab*, the first tab having a first remote end defining a *first remote end width for applying a first retraction force* and the second tab having a second remote end defining a *second remote end width which is different from said first remote end width for applying a second retraction force which is different from the first retraction force thereby providing an asymmetrical friction pad retraction feature*. (Emphasis added). None of the cited references, alone or in combination, discloses or suggests such a disc brake assembly, as now recited in Claim 1.

Evans discloses a retractor clip 30 having arms 33 and 34 which are *serpentine-like in shape* having respective straight portions 33a and 34a and curved portions 33b and 34b and preferably identical to each other but which can be formed differently

from one another so as to apply different magnitudes of forces against the brake shoes 15 and 16 (see col. 5, lines 26-50). Evans does not disclose or suggest a pad spring having a generally *U shaped portion having a first tab and a second tab*, the first tab having a first remote end defining a *first remote end width* for applying a first retraction force and the second tab having a second remote end defining a *second remote end width which is different from said first remote end width* for applying a second retraction force which is different from the first retraction force thereby providing an asymmetrical friction pad retraction feature, as recited in Claim 1. (Emphasis added). Accordingly, it is believed that Claim 1, along with dependent Claims 2-5 and 7, are patentable over the cited references.

Independent Claim 17 is directed to a brake shoe assembly and recites in part similar to Claim 1 that the brake shoe assembly includes a pad spring carried by at least one end of the backing plate for moving the friction pad from engagement with the rotor when said actuation means is released; wherein the pad spring includes a generally *U shaped portion having a first tab and a second tab*, the first tab having a first remote end defining a *first remote end width for applying a first retraction force* and the second tab having a second remote end defining a *second remote end width which is different from said first remote end width for applying a second retraction force which is different from the first retraction force thereby providing an asymmetrical friction pad retraction feature*. (Emphasis added). None of the cited references, alone or in combination, discloses or suggests such a brake shoe assembly, as now recited in Claim 17. Accordingly, for those reasons discussed above in connection with Claim 1, it is believed that Claim 17, along with dependent Claims 18-21 and 23, are patentable over the cited references.

Claim 8 is directed to a disc brake assembly and recites in part that a pad spring is carried by at least one end of one of the friction pads for moving the friction pads from engagement with the rotor when the actuation means is released; wherein the pad spring permanently yields and applies a corresponding force from a *geometrically decreasing spring rate as the friction pad wears*. (Emphasis added). None of the cited references, alone or in combination, discloses or suggests such a disc brake assembly, as recited in Claim 8.

Specifically, Evans discloses at col. 7, lines 33-38 “Thus, *even after substantial wear of the friction pad 15a and 16a has occurred and the retractor clips 30 are increasing permanently deformed, as illustrated in FIG. 6, the retractor clips 30 exert approximately the same amount of force against the brake shoes 15 and 16 as they exerted when the friction pads 15a and 16a were not worn.*” (Emphasis added). Thus, Evans clearly does not disclose or suggest that the pad spring permanently yields and applies a corresponding force from a *geometrically decreasing spring rate as the friction pad wears*, as recited in Claim 8. (Emphasis added). Accordingly, it is believed that Claim 8, along with dependent Claims 9, 11 and 12, are patentable over the cited references.

Independent Claim 24 is directed to a brake shoe assembly and recites in part similar to Claim 8 and recites part that a pad spring is carried by at least one end of the backing plate for moving the friction pad from engagement with the rotor when the actuation means is released; wherein the pad spring permanently yields and applies a corresponding force from a *geometrically decreasing spring rate as the friction pad wears*. (Emphasis added). None of the cited references, alone or in combination, discloses or suggests such a brake shoe assembly, as now recited in Claim 24. Accordingly, for those reasons discussed above with respect to Claim 8, it is believed that Claim 24, along with dependent Claims 25, 27 and 28 are patentable over the cited references.

In paragraph 4 of the Official Action, the Examiner has rejected Claims 13-15 and 29-31 under the provisions of U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,269,915 to Aoyagi. Claims 13-15 and 29-31 have been cancelled.

In paragraph 6 of the Official Action, the Examiner has rejected Claims 7, 11, 23 and 27 under the provisions of U.S.C. 103(a) as being unpatentable over Evans in view of Aoyagi. Claims 7, 11, 23 and 27 are believed to be patentable for those reasons discussed above with respect to their associated independent claims 1, 8, 17 and 24.

In view of the above amendments and accompanying remarks, it is believed that the application is in condition for allowance. However, if the Examiner does not believe that the above remarks and amendments place the application in condition for allowance, or if the Examiner has any comments or suggestions, it is requested that the Examiner contact Applicants' attorney at (419) 255-5900 to discuss the application prior to the issuance of an action in this case by the Examiner.